5.0 SAFETY ISSUE RESOLUTION

This section is organized around the following three main areas:

- Strengthening Federal Safety Assurance
- Learning from Internal and External Operating Experience
- Revitalizing ISM Implementation

Within each of the above main areas, supporting discussion addresses specific issues, bases for the issues, resolution approaches, and commitments/deliverables/milestones to resolve the issues.

5.1 Strengthening Federal Safety Assurance

Central to the needed improvement in federal safety assurance are:

- Instituting Central Technical Authorities;
- Providing Effective Federal Oversight;
- Instituting a Nuclear Safety Research Program;
- Establishing Clear Roles, Responsibilities, and Authorities;
- Ensuring Technical Capability and Capacity to Fulfill Safety Responsibilities.

5.1.1 Instituting Central Technical Authorities

Issue

The Department needs centralized technical expertise and operational awareness to assure adequate and proper implementation of Departmental nuclear safety policy and requirements.

Basis

The Department needs to improve the availability of technical expertise and operational awareness concerning implementation of its set of nuclear safety policies, requirements and standards. Currently the lack of qualified personnel and the lack of consistent adherence to existing practices for exemptions and waivers to nuclear safety requirements have led to variability in implementation. Additionally, line oversight of implementation is not consistently performed across the DOE Complex. Finally, the Department's line organizations have not systematically and consistently evaluated their nuclear safety performance to determine whether approved sets of requirements and standards are properly understood, applied and implemented.

Resolution Approach

Roles and Responsibilities. DOE needs to ensure that core nuclear safety expectations are fulfilled. More consistent evaluations of the flow-down of key nuclear safety requirements to contractors are needed to ensure that these requirements are adhered to and implemented adequately and properly,

and that nuclear safety performance meets or exceeds safety expectations. To promote achievement of these objectives, the Department established two Central Technical Authorities (CTAs), one in the NNSA and one in ESE. The CTA for NNSA is the Principal Deputy Administrator (or other line official designated by the Administrator), and the CTA for ESE is the Under Secretary.

The CTAs are line management executives who will be responsible for the following core nuclear safety functions for their organizations and facilities:

(1) concurs with the determination of the applicability of DOE Directives involving nuclear safety included in contracts pursuant to DEAR 970.5204-2(b);

(2) concurs with nuclear safety requirements included in contracts pursuant to DEAR 970.5204-2(c);

(3) concurs with all exemptions to nuclear safety requirements in contracts that were added to the contract pursuant to DEAR 970.5204-2;

(4) recommends to the Assistant Secretary for Environment, Safety and Health (EH) issues and proposed resolutions concerning DOE safety requirements, concurs in the adoption or revision of nuclear safety requirements (including supplemental requirements), and provides expectations and guidance for implementing nuclear safety requirements as necessary for use by DOE employees and contractors;

(5) maintains operational awareness of the implementation of nuclear safety requirements and guidance, consistent with the principles of Integrated Safety Management across the DOE complex (including, for example, reviewing Documented Safety Analyses, Authorization Agreements and readiness reviews as necessary to evaluate the adequacy of safety controls and implementation);

(6) periodically reviews and assesses whether DOE is maintaining adequate numbers of technically competent personnel necessary to fulfill nuclear safety responsibilities; and,

(7) provides inputs to, reviews, and concurs with DOE-wide nuclear safety related research and development activities proposed by the Assistant Secretary for Environment, Safety and Health.

Due to their positions as line management executives, the CTAs have the requisite authority to fulfill their roles and responsibilities. As line managers, the CTAs expect compliance with their direction from their subordinates. The NNSA Site Office Managers, the NNSA Program Secretarial Offices (PSOs), and the Chief of Defense Nuclear Safety (CDNS) all report directly to the Principal Deputy Administrator, so he is well positioned to fulfill his responsibilities. The ESE Program Secretarial Officers report directly to the Under Secretary and the Field Element Managers report to the Under Secretary through the PSOs. The Chief of ESE Nuclear Safety (CENS) and staff report to the ESE CTA. Therefore, the ESE CTA is also well positioned to fulfill his responsibilities.

The Assistant Secretary for Environment, Safety and Health (EH) plays an important role in ensuring the safety of DOE activities, but EH is not a CTA. EH is a staff position and does not have line responsibilities for operational or nuclear safety goals. EH is the DOE corporate safety officer and therefore is responsible for developing nuclear safety rules and is the Office of Primary Interest (OPI) for many DOE Directives that involve nuclear safety. DOE rules are established in accordance with the Administrative Procedures Act and DOE Directives are established in accordance with DOE Policy 251.1, Directives System Policy.

Support Staff. The NNSA Chief of Defense Nuclear Safety (CDNS) and staff are supporting the Principal Deputy Administrator in carrying out the functions of the CTA, including maintaining awareness of complex, high-hazard nuclear operations conducted in the NNSA nuclear complex, through such activities as: monitoring of applicable reports and performance metrics; reviewing various site-specific and complex-wide documents; technical discussions; and site visits.

The Under Secretary will be supported by the Chief of ESE Nuclear Safety (CENS) and his staff of dedicated technical experts. These staff will support the Under Secretary in carrying out the functions of the CTA, including maintaining awareness of complex, high-hazard nuclear operations conducted in the ESE nuclear complex, through such activities as: monitoring of applicable reports and performance metrics; reviewing various site-specific and complex-wide documents; technical discussions; and site visits. These CTA support staff will report to the Under Secretary and receive administrative support from EH. EH will have no supervisory role relative to the CTA staff. This reporting relationship is a change from the previous Department approach and is intended to clearly differentiate between the line safety functions of the CTA and the corporate safety functions of EH.

Preliminary estimates for the number of technical experts supporting the CTAs are in the range of 18-25 for the Department as a whole; the required support staffing level will be evaluated and set based on a detailed staffing analysis. The Department's objective is for the supporting technical experts to maintain exceptional technical capability with institutional constancy, and, therefore, their advice, counsel, and guidance would be readily sought from both headquarters and field offices on nuclear safety matters. Over time, the technical expertise of the supporting personnel would be easily recognizable and well-appreciated in both headquarters and the field.

The CTAs and supporting technical experts will work closely with federal line managers and, as necessary, coach and mentor on techniques, tools, and skills to improve and upgrade the quality of the Department's technical safety management capability. The CTAs and supporting technical experts will also maintain an operational awareness of field activities, to include safety basis implementation, nuclear start-ups and restarts, personnel training and qualifications, maintenance, criticality safety, conduct of operations, and radiation protection. The CTAs and supporting technical experts will maintain awareness of production decisions and assure that the desire to meet programmatic commitments is properly balanced with safety. The operational awareness role of the CTAs is not intended to duplicate the independent oversight function.

The CTAs have already begun to allocate positions and search for candidates for the key nuclear safety staff experts. The Department is moving ahead in its hiring efforts and is taking steps to sustain adequate staff resources over the long run.

Customer, Owner, and Regulator. The Department's plan for the CTAs assigns the function to line management executives. These positions share customer and owner responsibilities with the PSOs and field elements yet are above the day-to-day operational decision-making level and therefore maintain unto themselves the self-governor perspective.

As indicated previously, EH is the corporate safety officer within DOE. EH is tasked with developing nuclear safety rules in accordance with the Administrative Procedures Act. These rules are developed by groups of experts including representatives from the line organizations. All interested parties, including the CTAs, have an input. EH is also the OPI for many DOE nuclear safety directives. Like rules, directives are developed by teams of experts including personnel from the line organizations and all affected parties have the right and the expectation to provide inputs.

Nuclear safety expectations in directives may only become requirements for contractors when they are added to the contract. This is a line function. Authority to determine the nuclear safety requirements in List B of DOE contracts has been delegated to Contracting Officers. The CTAs are line managers senior to the Contracting Officers. The CTAs' authorities include concurring with the nuclear safety requirements in List B of contracts and concurring with exemptions granted to nuclear safety requirements. The CTAs also have the function to provide operational awareness and ensure that nuclear safety requirements are appropriately and consistently implemented. Therefore, the CTAs actively fill the self-governor roles of establishing requirements, ensuring that they are appropriately promulgated (including exemptions), and verifying that they are implemented.

Implementation and Institutionalization. To fully implement the CTA role, the Department plans to:

- Define the detailed functions, responsibilities and authorities for the CTAs.
- Update the Department Functions, Responsibilities, and Authorities Manual (FRAM) and Program office Functions, Responsibilities, and Authorities (FRA) documents to reflect the CTAs' functions, responsibilities, and authorities.
- Complete a staffing analysis for technical experts necessary to support CTAs.
- Fill the positions for supporting technical experts.
- Define technical qualifications of the CTA and of the CTA support staff, including the NNSA CDNS, and the ESE CENS. Where technical qualifications are not met, corrective or compensatory actions will be taken.
- Define the processes and protocols for fulfilling the CTA roles and responsibilities. For example, the specifics on how and when the CTAs must be involved in the process for granting exemptions to nuclear safety rules and orders needs to be finalized, considering existing processes that require approval of the program line managers and the OPI.
- Describe how the CTAs will interface with other organizations (for example, Office of Enforcement, field elements, and program offices). For example, the 2 CTAs and EH-1 will need to meet periodically to coordinate activities.

- Establish an operating budget for fulfilling CTA duties.

In establishing and bringing the CTAs to a full implementation status, the Department has identified the following three key milestones:

1. The CTAs are formally established – the CTAs are formally designated, and the CTA roles and responsibilities have been defined – The Secretary approved the roles and responsibilities in April 2005.

2. The CTAs have adequate technical support – key critical staff positions that support the CTAs have been defined and are filled on a permanent or temporary basis.

3. The CTA function is fully implemented – CTAs are supported by sufficient resources (personnel, funding, etc.), have processes defined on how they will implement their functions, have a demonstrated record of performance, and feedback is available on the impact of the CTA function.

The Department will keep the Board informed on the progress of the CTA implementation and institutionalization via periodic meetings with the Board on this Implementation Plan, as described in Section 6.

Deliverables/Milestones

Commitment 1: Formally establish the CTAs (as described above).

Lead Responsibility:	Secretary of Energy
Deliverable:	Secretarial memo identifying the CTAs and their roles and responsibilities.
Date:	**Completed - April 26, 2005**

Commitment 2: Provide Adequate Technical Support for the CTAs (as described above).

Lead Responsibility:	Central Technical Authorities
Deliverable:	Letter report from each of two CTAs to the Secretary declaring the CTA has adequate technical support and providing the basis for this declaration.
Date:	January 2006 (NNSA); April 2006 (ESE)

Commitment 3: Fully Implement the CTA function (as described above).

Lead Responsibility:	Central Technical Authorities
Deliverable:	Letter report from each of two CTAs to the Secretary declaring the CTA function fully implemented and providing the basis for this declaration (NNSA report requires NNSA Administrator's concurrence).
Date:	Twelve months after providing adequate technical support to the CTAs, per Commitment 2. [January/April 2007]

Integration with ISM system

Establishment of effective CTAs relate mostly to two ISM core functions: #1 – Define Work Scope, and #5 - Feedback and Improvement. The CTA is involved in defining the appropriate set of requirements and standards in contracts to be applied to hazards to define hazard controls. The CTA is also involved in providing oversight and feedback throughout the organization.

Regarding the ISM guiding principles, which establish the general environment or context for implementing the ISM functions, most of the ISM principles are invoked. ISM Guiding Principle #1 – Line Management Responsibility for Safety – led to the decisions that the CTAs needed to be line management executives. ISM Guiding Principle #2 – Clear Roles and Responsibilities – led to clear articulation of the CTAs' roles and responsibilities and the commitment to update the DOE FRAM. ISM Guiding Principle #3 – Competence Commensurate with Responsibilities – led to need to attract a high quality technical staff to support this function, and the need to articulate the technical qualifications of the CTA and key staff. ISM Guiding Principle #4 – Balanced Priorities – recognizes the need for appropriate checks and balances to ensure safety is not sacrificed for productivity; one of the key arguments for establishing the CTAs is to provide perspective and distance from the work in the field along with an effective regulatory and oversight check to program offices which may be more drawn to the owner and customer roles. ISM Guiding Principle #5 – Identification of Safety Standards and Requirements is at the center of the CTA's responsibilities for establishing an effective set of safety requirements and for proper application of this set to contracts to design, construct, manage, operate, and decommission defense nuclear facilities.